

ABSTRACT

A self-contained means to move a media or component, such as fiber (12) or other miniature object, such as a lens, into a desired position is given. The fiber (12) or component is moved in various dimensions to achieve the desired location and is locked into position after the move. An input electrical signal, such as a voltage or current controls movement. A thermal actuator comprises the micro-positioner (80) using semiconductor technology in one embodiment. In another embodiment, of the present invention, a thermal or electrostatic actuator uses mechanical gears to move the fiber. Another embodiment of the present invention is implemented using mechanical technology such as microelectromechanical system (MEMS) technology. Another embodiment of the present invention, utilizes piezoelectric materials to facilitate fiber movement.